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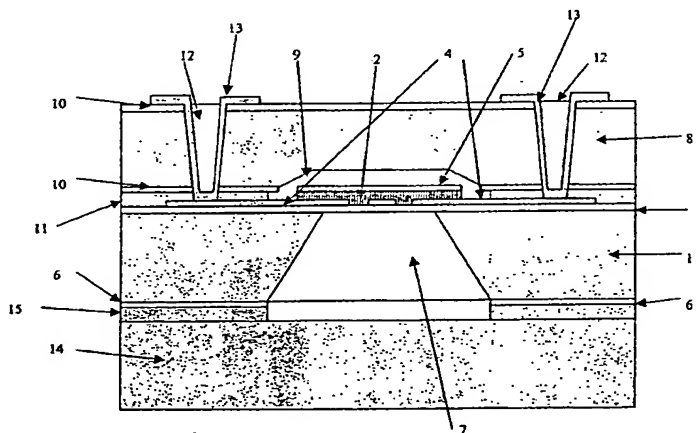
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(54) Title: IMPROVEMENTS IN OR RELATING TO FILTERS



(57) Abstract: A method is provided by which filters consisting of a plurality of thin film bulk acoustic resonators (FBAR) fabricated on a semiconductor wafer such as silicon or some other type of wafer can be hermetically packaged in a way that presents a component which can be easily handled by conventional pick-and-place machines. This package consists of a sandwich of the wafer (1) bearing the thin film piezoelectric resonator (2) and at least one silicon wafer (8, 14). The bond between these wafers (1, 8, 14) is accomplished by some means such as anodic bonding, using a low melting point glass or a metal bonding layer. Contacts to the resonating components are accomplished by etching holes (12) through one of the bonded wafers (8) using a process such as deep reactive ion etching. Contact electrodes are deposited into the holes (12) and onto the surface of the wafer bearing the holes (12). The resulting chip components are separated prior to use by sawing or some other method. As an alternative etching, contact electrodes can be deposited onto the edges of the chips after separation (Figure 9).